

### **AMENDMENTS TO THE SPECIFICATION:**

Please replace paragraph [0009] of the published application with the following paragraph:

The present invention addresses this problem by providing a novel collagen production method wherein a fermentation process is employed to obtain collagen from collagen-containing tissues. Fermentation is the microorganisms' aerobic or anaerobic biological oxidation of organic compounds, such as glucose, to yield ATP and simpler organic compounds which are needed by the cell for biosynthetic or assimilatory reactions (Samuel, B. et al., Medical Microbiology 4<sup>th</sup> Ed. Section 1 (1996)).

Microorganisms are capable of generating a wide array of molecules as end points to fermentation. Collagen-containing tissues can be subjected to fermentation by different microorganisms, including but not limited to those that are considered as Generally Regarded As Safe (GRAS). Collagen-containing tissues that have been subjected to fermentation reactions can result in better quality collagen and greater collagen extraction yields. The application of fermentation also reduces the use of chemical and organic solvents that may be harmful to the environment and the workers.

Please replace paragraph [0029] of the published application with the following paragraph:

As used herein, the terms "fermenting" and "fermentation" refer to the aerobic or anaerobic process in which microorganisms such as bacteria, yeast, and other small organisms metabolizes one or more substances to produce the energy and chemicals it needs to live and re-produce. This process of chemical reactions will produce some form of by-product. Microorganisms are capable of generating a wide array of

molecules as end points to fermentation. For example, carbon dioxide and ethanol are the by-products produced in brewing by yeast and pyruvate is converted into lactic acid in lactic acid fermentation. Fermentation is an ATP-generating process in which organic compounds act as both donors and acceptors of electrons, and it can take place in the absence of O<sub>2</sub> (Berg, M. Jeremy et al. Biochemistry chap. 16 (2002)).

Please replace paragraph [0040] of the published application with the following paragraph:

The present invention is directed to a method of producing collagen comprising providing collagen-containing tissues, providing microorganisms, and allowing the microorganisms to ferment the collagen-containing tissues. Fermentation is the aerobic or anaerobic process in which microorganisms such as bacteria, yeast, and other small organisms metabolizes one or more substances to produce the energy and chemicals it needs to live and re-produce, and in which some form of by-product is produced. The collagen-containing tissues may be obtained from mammals, aquatic animals, or birds. Once collagen-containing tissues are being subjected to the fermentation process, collagen composition comprising mostly of collagen monomers can be readily extracted therefrom in much higher yield, as compared to yields from other methods in the prior art.